

Critical Facilities Defined

The following definition of Critical Facilities is from the most recent CRS manual.

“Critical facilities:

- *Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic and/or water-reactive materials;*
- *Hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood;*
- *Police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and*
- *Public and private utility facilities that are vital to maintaining or restoring normal services to flooded areas before, during, and after a flood.”*

The points available are:

“Protection for critical facilities (PCF) (Maximum credit: 100 points)

For CRS credit purposes, critical facilities are defined in Section 130. Use either:

1. *PCF = 100, where new critical facilities are prohibited from the 500-year floodplain; or*
2. *PCF = 50, where new and substantially improved critical facilities are required to be protected from damage and loss of access as a result of the 500-year flood or the flood of record, whichever is higher.*

Note that credit is provided only if there is regulatory language that protects critical facilities. The fact that there are currently no critical facilities in the regulated floodplain may indicate community policy, but adopted regulations are required for PCF credit.

Requiring protection for critical facilities serves several purposes: it reduces damage to vital public facilities; it reduces pollution of flood waters by hazardous materials; and, most importantly, it ensures that the facilities will be operable during most flood emergencies.

To receive full credit for this element, the regulations must be enforced in the 500-year floodplain. On older FIRMs, the 500-year floodplain is shown as the SFHA plus the B Zone. The ordinance can simply specify the types of facilities prohibited from or protected within the A and B Zones. On newer FIRMs with AE and X Zones, the 500-year floodplain is shown as the SFHA plus the shaded X Zone. In either case, the 500-year flood elevation becomes the “flood protection elevation” for critical facilities. If the community enforces critical facility protection regulations in only part of its flood hazard area, e.g., in the floodway or V Zone, the impact adjustment is based on the 500-year floodplain rather than aRF, the area of the regulatory floodplain.

Critical facilities planning (CFP) (Maximum credit: 50 points)

This element credits warning and coordinating with operators of critical facilities. Critical facilities are defined in Section 130.

1. Prerequisites:

- (a) The community must receive credit for the flood threat recognition system and for disseminating a flood warning to the general public (if FTR = 0 or EWD = 0, CFP = 0).*
- (b) The community must update the information on its critical facilities at least annually.*

2. Credit points: CFP = the credit points as follows:

- (a) CFP1 = 10, if the adopted plan includes the names and telephone numbers of the operators of all critical facilities affected by flooding. This information must be updated at least annually;*
- (b) CFP2 = 20, if the adopted plan includes arrangements for providing special warnings or early notifications directly to all facilities that need them; and*
- (c) CFP3 = 20, if the critical facilities needing them have their own flood response plans that have been developed, reviewed, or accepted by the community.*

As with the other elements of this activity, the community must receive credit for its flood threat recognition system in order to receive credit for this element.

See Section 130, Glossary, for the definition of “critical facilities” used to determine CRS credit. The community’s flood response plan must list the facilities considered critical in a flood. Facilities not subject to flooding generally do not need to be addressed, although in some cases loss of access can cause a critical situation. Other facilities in flood-free sites may be needed to support the flood response effort (e.g., sandbag suppliers and shelters for evacuees).

More credit points are available if the community provides warnings tailored to the needs of its critical facilities. The timing and type of notice would depend on the facility and its needs. For example, an industrial complex where there is a lot of noise may need a direct telephone call because no one would hear a siren. Another facility may need an early notice in order to get ready. To obtain the 20 points, the community does not need to provide a special warning to all critical facilities, only all of those identified in the flood response plan as needing one.

More credit is provided if there are flood response plans for individual critical facilities. The plans may be developed by the community or developed by the facilities’ operators and reviewed by the community. The facilities’ plans should include flood response tasks similar to those credited under Section 611.c, Other Response Efforts.

Example 611.d-1. *Watertown’s multi-hazard plan lists all critical facilities in the community, their operators, and their telephone numbers. The list is updated by the emergency manager every six months. [CFP1 = 10 points]*

There are three critical facilities affected by flooding of the Riley River: the Public Works garage, the First Christian Church, and Lincoln Elementary School. The first is in the floodplain and the last two are adjacent to the floodplain but are needed for the flood response plan. The City's plan includes providing special warnings to these three facilities. [CFP2 = 20 points]"

The following discussion of the federal definition or lack thereof is from FEMA's Hazard Mitigation Grant Program instructions and is instructive regarding local authority, utilities and infrastructure.

“Question 1: For planning purposes, what should be considered a critical facility?”

Answer: Every jurisdiction is unique. The list of assets that are most important to protect, as well as the criticality of any given facility, can vary widely from community to community. Thus, there is no universal definition of a critical facility, nor is one associated with the DMA 2000 planning requirements as promulgated in the Interim Final Rule. For planning purposes, a jurisdiction should determine criticality based on the relative importance of its various assets for the delivery of vital services, the protection of special populations, and other important functions.

A good place to start is Step Three of FEMA's Mitigation Planning How-To Guide, Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2). Based on a hazard-by-hazard identification of facilities that may be at risk, the Guide's emphasis on determining priorities for inventory data collection will help planners identify assets that are most critical to the jurisdiction. The companion publication Integrating Manmade Hazards into Mitigation Planning (FEMA 386-7) builds on the guidance in Understanding Your Risks, detailing how the asset inventory can be tailored to focus on high-risk facilities such as critical infrastructures and key assets (see definitions below). A third potential point of departure is the inventory information available with FEMA's HAZUS-MH loss estimation software. HAZUS-MH databases include information on essential facilities such as hospitals, police and fire stations, emergency operations centers, shelters, and schools; transportation systems; utility lifelines; high potential loss facilities such as potable water, wastewater, oil, natural gas, electric power, and communication systems; and hazardous material facilities.

Numerous other sources provide additional guidance on identifying facilities that may be critical. First, FEMA's Public Assistance Guide (FEMA 322) states that "A critical facility is a structure that, if flooded, would present an immediate threat to life, public health, and safety. Critical facilities include hospitals, facilities that produce toxic materials, and emergency operations centers." The related regulation at 44 CFR § 206.226, Restoration of damaged facilities (text / PDF), states that "Eligible private nonprofit facilities may receive funding under the following conditions, The facility provides critical services, which include power, water (including water provided by an irrigation organization or facility in accordance with § 206.221(e)(3)), sewer services, wastewater treatment, communications, emergency medical care, fire department services, emergency rescue, and nursing homes"

The definition can be construed more or less broadly as appropriate to the jurisdiction's planning approach. FEMA's State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning does not define critical facilities but provides the following examples:

Emergency service facilities and equipment (fire stations; police stations; custodial facilities, such as jails and juvenile detention centers, hospitals, and other health care facilities; rescue squads; public works facilities, etc.).

- *Communications networks (telephones, emergency service radio systems, repeater sites and base stations, television and radio stations, etc.).*
- *Water supply system/facilities, to include waste water treatment.*
- *Utilities (power plants, substations, power lines, etc.)*
- *Transportation networks (roads, bridges, airports, rail terminals, maritime ports).*
- *Homes, businesses, public facilities, etc.*

*While asserting the criticality of individual homes and businesses may require some explanation, the other assets mentioned are of a type that would be acceptable as part of most any critical facilities inventory. This argument is supported in FEMA's *What is a Benefit? Guidance On Benefit-Cost Analysis Of Hazard Mitigation Projects*. *What is a Benefit?* includes police, fire and medical buildings, Emergency Operations Centers, and emergency shelters in the category of critical facilities. However, the document also mentions utilities such as electric power, potable water, and wastewater, as well as roads and bridges, as distinct from ordinary buildings, stating that "Ordinary buildings include residential and commercial buildings, and public buildings used for non-critical functions, such as schools and administrative buildings."*

*Continuity of operations (COOP) planning provides yet another perspective on criticality. FEMA's *Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings* (FEMA 426) defines critical assets as "those assets essential to the minimum operations of the organization, and to ensure the health and safety of the general public", while the Homeland Security Act of 2002, Section 2(9) (6 U.S.C. 101(9) defines key resources as "publicly or privately controlled resources essential to the minimal operations of the economy and government."*

*Finally, national-level homeland security policy provides guidance on the kinds of assets that may be considered critical. First, critical infrastructures are defined in 42 U.S.C. 5195c(e), the *Critical Infrastructures Protection Act of 2001*, as "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters." According to the *National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*, critical infrastructure sectors comprise agriculture & food; water; public health; emergency services; defense industrial base; telecommunications; energy; transportation; banking & finance; chemicals & hazardous materials; and postal & shipping. While some of these, such as the defense industrial base, are more national in scope, most of them are first and foremost State, local, and private-sector activities.*

In addition to critical infrastructures, the National Strategy referenced above uses the term key assets. These are described as "individual targets whose destruction could cause large-scale injury, death, or destruction of property, and/or profoundly damage our national prestige, and confidence." Furthermore, "such assets and activities alone may not be vital to the continuity of critical services on a national scale, but an attack on any one of them could produce, in the worst case, significant loss of life and/or public health and safety consequences." While this

term is generally used in the context of identifying potential venues for sabotage or terrorist attack, the definition may be helpful in categorizing assets for all-hazard planning purposes.”

In summary:

- 1) Local code provision should include a definition, a prohibition of facilities within the 500-year floodplain (100 pts) or a requirement to protect facilities within the floodplain from flooding (50 pts), and possibly a requirement for operators to submit flood response plans for review and approval (20 pts).
- 2) It is clearly within our authority to regulate the location of critical facilities including utilities within or serving flood prone areas.

Community Rating System

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.

As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

1. Reduce flood losses;
2. Facilitate accurate insurance rating; and
3. Promote the awareness of flood insurance.

How are Flood Insurance Premium Discounts Calculated?

For CRS participating communities, flood insurance premium rates are discounted in increments of 5%; i.e., a Class 1 community would receive a 45% premium discount, while a Class 9 community would receive a 5% discount (a Class 10 is not participating in the CRS and receives no discount). The CRS classes for local communities are based on 18 creditable activities, organized under four categories:

1. Public Information,
2. Mapping and Regulations,
3. Flood Damage Reduction, and
4. Flood Preparedness.

The table below shows the credit points earned, classification awarded, and premium reductions given for communities in the NFIP CRS.

Credit Points	Class	Premium Reduction SFHA*	Premium Reduction Non-SFHA**
4,500+	1	45%	10%
4,000 – 4,499	2	40%	10%
3,500 – 3,999	3	35%	10%
3,000 – 3,499	4	30%	10%
2,500 – 2,999	5	25%	10%
2,000 – 2,499	6	20%	10%
1,500 – 1,999	7	15%	5%
1,000 – 1,499	8	10%	5%
500 – 999	9	5%	5%
0 – 499	10	0	0

*Special Flood Hazard Area

**Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage. The Preferred Risk Policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. The CRS credit for AR and A99 Zones are based on non-Special Flood Hazard Areas (non-SFHAs) (B, C, and X Zones). Credits are: classes 1-6, 10% and classes 7-9, 5%. Premium reductions are subject to change.



Location: RFCD - CONFERENCE ROOM Date: 3/3/10

Meeting: ORDNANCE OPEN HOUSE FOCUS: CRITICAL FACILITIES

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